

Notice of Allowability

Application No.

10/849,840

Examiner

Jeanne A. Di Grazio

Applicant(s)

LEE, DEUK SU

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to ____.
2. ☒ The allowed claim(s) is/are 23-38.
3. ☒ The drawings filed on 21 May 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 21 May 2004
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date ____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other ____.

DETAILED ACTION

Preliminary Amendment

Applicant's Preliminary Amendment in Paper of May 21, 2004 is acknowledged. The title is amended to read: -- IN-PLANE SWITCHING MODE LIQUID CRYSTAL DISPLAY WITH A COMPENSATION ELECTRODE STRUCTURE AND METHOD OF FORMING THE SAME --

Allowable Subject Matter

Claims 23-38 are allowed.

The following is an examiner's statement of reasons for allowance:

As to claim 23, relevant prior art of record did not disclose alone or in combination an in-plane switching mode liquid crystal display with a compensation electrode structure comprising: a common electrode, an insulating layer covering the common electrode, a compensation electrode over a portion of the insulating layer and a pixel electrode over another portion of the insulating layer and wherein the compensation electrode overlaps with the common electrode and in combination with Applicant's other recited elements.

The above limitations result in a novel in-plane switching mode liquid crystal display device as best illustrated in Applicant's Figure 9B.

The closest art of record is United States Patent 6,724,454 B2 (to Kim et al.) in which is illustrated an in-plane switching liquid crystal display. Figure 3B illustrates a shielding layer (215a) formed on a lower substrate (118). Data electrodes (214) are above the shielding layer (215a) and separated by a layer. Common electrodes (213) are above the data electrodes (214) and shielding layer (215a). However, the data electrodes and shielding layer are not on the same plane and the common electrode does not overlap with the data electrodes.

As to claim 31, relevant prior art of record did not disclose alone or in combination a method of forming an in-plane switching mode liquid crystal display with a compensation electrode structure comprising the steps of: forming a common electrode, forming an insulating layer covering the common electrode, forming a compensation electrode over a portion of the insulating layer and forming a pixel electrode over another portion of the insulating layer and wherein the compensation electrode overlaps with the common electrode and in combination with Applicant's other recited method steps.

The above method results in a novel in-plane switching mode liquid crystal display device as best illustrated in Applicant's Figure 9B.

The closest art of record is United States Patent 6,724,454 B2 (to Kim et al.) in which is illustrated an in-plane switching liquid crystal display. Figure 3B illustrates a shielding layer (215a) formed on a lower substrate (118). Data electrodes (214) are above the shielding layer (215a) and separated by a layer. Common electrodes (213) are above the data electrodes (214) and shielding layer (215a). However, the data electrodes and shielding layer are not on the same plane and the common electrode does not overlap with the data electrodes.

As to claims 24-30 and 32-38, they are dependent either directly or indirectly upon claims with allowable subject matter above.

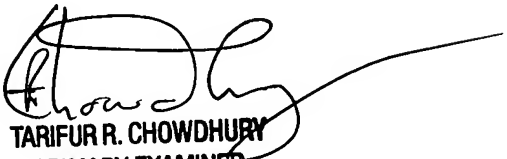
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeanne A. Di Grazio whose telephone number is (571)272-2289. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim, can be reached on (571)272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jeanne Andrea Di Grazio
Patent Examiner
Art Unit 2871


TARIFUR R. CHOWDHURY
PRIMARY EXAMINER